

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/052472

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G11B20/10 G11B20/14 H03M5/14 H03M13/41 G11B7/007
G11B7/005

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G11B H03M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>IMMINK A H J ET AL: "Signal processing and coding for two-dimensional optical storage"</p> <p>GLOBECOM'03. 2003 - IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE. CONFERENCE PROCEEDINGS. SAN FRANCISCO, DEC. 1 - 5, 2003, IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, NEW YORK, NY : IEEE, US, vol. VOL. 7 OF 7, 1 December 2003 (2003-12-01), pages 3904-3908, XP010677345</p> <p>ISBN: 0-7803-7974-8</p> <p>the whole document</p> <p style="text-align: center;">----- -/--</p>	1,4-9

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

10 February 2005

Date of mailing of the international search report

18/02/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Gil Zamorano, A

BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/052472

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	TOMITA Y ET AL: "25 GB read-only disk system using the two-dimensional equalizer" ISOM. INTERNATIONAL SYMPOSIUM ON OPTICAL MEMORY, XX, XX, vol. 40, no. 3B, 5 September 2000 (2000-09-05), pages 1716-1722, XP002251624 the whole document	1,4-9
A	KATO T ET AL: "Two-dimensional run-length-limited code and partial response maximum likelihood system with multi-track recording" IEEE, 7 July 2002 (2002-07-07), pages 51-53, XP010600270 the whole document	1,4-6
A	US 5 491 678 A (MAEDA ET AL) 13 February 1996 (1996-02-13) column 4, line 57 - column 8, line 64 column 12, line 32 - column 14, line 18	1,6-9
A	US 5 808 988 A (MAEDA ET AL) 15 September 1998 (1998-09-15) column 7, line 62 - column 13, line 51	1,6
A	WO 02/054394 A (KRAEMER, DARREN; SIWICK, BRADLEY; MILLER, R., J., DWAYNE) 11 July 2002 (2002-07-11) page 9, line 17 - page 12, line 19	1,6
A	WO 03/034596 A (KONINKLIJKE PHILIPS ELECTRONICS N.V; COENE, WILLEM, M., J., M; OPHEY, WI) 24 April 2003 (2003-04-24) page 6 - page 9	1,4,6-9

BEST AVAILABLE COPY
BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP2004/052472

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5491678	A	13-02-1996	WO	9526548 A1	05-10-1995
			US	5774444 A	30-06-1998
			US	5835469 A	10-11-1998
			US	5657308 A	12-08-1997
			US	5886969 A	23-03-1999
			JP	3149455 B2	26-03-2001
			JP	4228112 A	18-08-1992
US 5808988	A	15-09-1998	JP	8287468 A	01-11-1996
			JP	8287470 A	01-11-1996
WO 02054394	A	11-07-2002	WO	02054394 A2	11-07-2002
			CA	2431981 A1	11-07-2002
			US	2002136133 A1	26-09-2002
WO 03034596	A	24-04-2003	EP	1440513 A1	28-07-2004
			EP	1440514 A1	28-07-2004
			WO	03034595 A1	24-04-2003
			WO	03034596 A1	24-04-2003
			TW	589827 B	01-06-2004
			US	2004252618 A1	16-12-2004
			US	2004184381 A1	23-09-2004

BEST AVAILABLE COPY